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ABSTRACT

In response to a Board of Trustees request for information and recommendations concerning the future use of the Gold Creek property owned by the Los Angeles Community College District, this report emphasizes that the use of this site for instructional field experiences enhances the quality of environmental education for the district's diverse metropolitan student body. Included in the report are descriptions of the history and characteristics of the property, the uses of the site, the advantages and limitations of Gold Creek for instructional use, and alternative plans. Disciplines using the property include anthropology, biology, botany, earth science, entomology, environmental science, geology, meteorology, microbiology, natural resources management, and zoology. Recommendations for improvement of the site include the following: (1) the exclusive use of the property as an educational facility by the colleges; (2) graveling the road and parking area and adding sanitary facilities; (3) the assignment of an environmental studies coordinating instructor to develop the property; (4) the undertaking of a study regarding available water supply; (5) the construction of a permanent instructional facility; and (6) the assignment of an environmental studies center supervisor to maintain the facility. (Author/MB)

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LOS ANGELES COMMUNITY COLLEGE DISTRICT

GOLD CREEK: PRESERVING AN

ENVIRONMENTAL STUDIES CENTER

November 1976

Suzanne Brooks

Staff Assistant

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DIVISION OF EDUCATIONAL PLANNING AND DEVELOPMENT

OFFICE OF COLLEGE RELATIONS AND COMMUNITY SERVICES

Ray Johnson, Director

JC 780 521

ABSTRACT

This report responds to a Board of Trustees request for information and recommendations concerning the future use of the Gold Creek property owned by the Los Angeles Community College District. It emphasizes that the use of this site for instructional field experiences enhances the quality of environmental education for the District's diverse metropolitan student body. Included in the report are descriptions of the history and characteristics of the property, the present uses of the site, the advantages and limitations of Gold Creek for instructional use, and alternative plans for the next five years.

The site is within reasonable traveling distance from all nine colleges, and its availability has reduced considerably the expense of field trips for life and earth science classes. Disciplines using the property include Anthropology, Biology, Botany, Earth Science, Entomology, Environmental Science, Geology, Meteorology, Microbiology, Natural Resources Management, and Zoology. Tasks accomplished by instructors in these areas that have enhanced Gold Creek's value as an educational facility include publication of the Gold Creek Station Syllabus, development of marked trails and audio-taped tours, coordination of grants for a building and equipment, and sponsoring of faculty in-service training workshops at the site.

The recorded utilization is at present a fraction of the potential, due to the need for improvement of certain physical aspects of the site, and for a consistent policy concerning the management and use of this fragile natural resource. The report's recommendations, in response to these needs, include the following:

1. That the Gold Creek property be designated the "Gold Creek Environmental Studies Center," to be used exclusively as an educational facility by the Los Angeles Community Colleges.

2. That the property be improved by graveling the road and the parking area, and adding the necessary sanitary facilities.

3. That an "Environmental Studies Coordinating Instructor" be assigned on a half-time basis to coordinate development of the property for instructional use and improvement of the educational program.

4. That a study be undertaken of the available water supply to assess its alignment with present and proposed utilization, to determine the need for potable water, and for non-potable water for sanitary facilities and fire-fighting reserve.

5. That a permanent instructional facility, including a multi-purpose classroom/laboratory, office/library, and outdoor amphitheater, be constructed at Gold Creek.

6. That an "Environmental Studies Center Supervisor" be assigned to maintain and supervise the facility after the construction project is completed. This Supervisor will work with the "Environmental Studies Coordinating Instructor" in development and implementation of Gold Creek programs.

TABLE OF CONTENTS

		Page
	ABSTRACT	i
I.	PURPOSE OF THIS REPORT	1
II.	DESCRIPTION OF THE PROPERTY	2
III.	HISTORY OF THE PROPERTY	4
IV.	PRESENT USES OF THE PROPERTY	6
	Management	6
	Instruction	7
	The Field Experience	8
	Faculty In-Service Training Workshops	10
	Utilization Data	11
	Community Services Use	12
	Advantages and Limitations	13
V.	EVALUATION PLAN	16
VI.	ALTERNATIVE PLANS	18
VII.	SUMMARY	21
VIII.	RECOMMENDATIONS	23
	APPENDICES	26
	APPENDIX A - Map of the Gold Creek Property	27
	APPENDIX B - Map of Distances to Gold Creek	28
	APPENDIX C - The Indian Rings	29
	APPENDIX D - Recommendation Memo - Gold Creek Study Committee	30
	APPENDIX E - Budget, 1973-74 to 1977-78	31
	APPENDIX F - Equipment List - NDEA Grant	32
	APPENDIX G - Rules for Utilization of Gold Creek Field Station	34
	APPENDIX H - Community Services Activities for Gold Creek	35

TABLE OF CONTENTS (cont'd)

Page

APPENDIX I - Rio Hondo and Mt. San Antonio College Study Preserves . . 36

APPENDIX J - Environmental Studies Coordinating Instructor 38

APPENDIX K - Environmental Studies Center Supervisor 39

COMMITTEE MEMBERS 40

SOURCES 41

I. PURPOSE OF THIS REPORT

The purpose of this report is to present information and recommendations for the future use of the Gold Creek property, based on the work of the Gold Creek Committee and the Gold Creek Standing Committee of Instructors. The report addresses itself to a need for definition and clarification of the use to which the District intends to put Gold Creek in the next five to ten years.

It includes information describing the history and characteristics of the property, the present uses of the site, the limitations placed on present usage and specific short-range recommendations to solve these problems, and long-range goals for the facility. An evaluation plan is presented in an accompanying document.

The underlying assumptions relating to the alternative uses discussed in this report are as follows:

1. Higher education is the primary responsibility of the Los Angeles Community College District, and the resources of the District, including the Gold Creek site, are to be used in fulfillment of that responsibility.

2. Use of Gold Creek as a field station for environmental studies enhances instruction in the District.

3. It is a regular practice of institutions of higher education to own and set aside natural reserves as sanctuaries and environmental study areas. The Los Angeles Community College District with its nine colleges serves a diversified and large student body that justifies a similar site.

4. Ecological and environmental awareness is vital to the preservation of the quality of life and the survival of humanity, and preservation in the natural state of areas such as Gold Creek contributes to this awareness.

5. This District has an opportunity to set a responsible and worthwhile example for the benefit of present and future generations, at a time when irreparable damage is being done to similar areas, by setting aside Gold Creek as an environmental studies center and wildlife sanctuary.

6. Planning and development for the site should be with regard for the unique and fragile natural reserve that it is, and involve careful study of the environmental impact of any proposed usage.

II. DESCRIPTION OF THE PROPERTY

Gold Creek lies in the San Gabriel mountains north of the Little Tujunga Canyon. It is a unique 240 acre natural reserve of native wildlife and vegetation surrounded by the Angeles National Forest. At an elevation which varies from 2,080 to 2,640 feet above sea level, the site has ninety acres of nearly level terrain while the remainder is steep or sloping (see Appendix A). Gold Creek, fed by two smaller tributaries called Boulder Creek and Center Creek, traverses the property in a southwesterly direction from the northeast corner to the Little Tujunga drainage and Hansen Flood Control Reservoir at the northeast end of the San Fernando Valley.

The property is rare in its great diversity of flora and fauna in a remarkably compact area. Mark Newton, Associate Professor of Geology at Los Angeles City College, states in the Gold Creek Syllabus that "the classic plant formations of 'Mediterranean' climates are well-represented in the area; coniferous woodland, oak woodland, chaparral, coastal scrub, and riparian thickets." The three reasons for this unique diversity and abundance, Newton states, are these: "(1) the Station is rather intermediate in its location between coastal and interior climatic regimes; (2) it has topographical variety with slopes facing in all directions; and (3) owing to geological circumstances, the Station has abundant water the year around." Many varieties of native birds, mammals, reptiles, amphibians, and arthropods are present at Gold Creek, thus providing--surprisingly close to a huge urban area--an uncommonly various area for the study of the natural environment. The site is only 80 minutes travel time from Los Angeles Harbor College, the most distant campus. East Los Angeles College and Southwest are 60 minutes away, Los Angeles Trade-Tech and West, 50 minutes, Los Angeles City College, 45 minutes, Pierce, 35 and Valley only 30 minutes (see Appendix B).

In addition to its value to students of biology, Gold Creek possesses for those interested in geology most of the diverse rock types of the San Gabriel Mountains and the major kinds of structural features--folds, faults, and unconformities. These features were in some cases greatly affected by the February, 1971 earthquake, thus creating even more interesting topographic characteristics. The presence of great faults in the area results in an unfailing supply of underground water. The reason given by Newton for this unusual phenomenon is that "the fault plane, marked by a crushed zone of clay-rich 'fault gouge,'

acts as an impermeable barrier or dam to the percolation of groundwater, which pools up behind the fault and comes to the surface as a series of springs all along it." This modifies the entire Cold Creek ecosystem, enabling, for example, oak trees to survive independent of the yearly rainfall.

Gold Creek also meets two requirements for a valuable archeological site--a water supply and a junction of two or more ecotones, or different biotic communities. Two sites have been located on the property and registered with the Archeological Survey Department at the University of California at Los Angeles. One site, known as Indian Terrace, is a series of thirteen interconnecting stone rings on one of the lower terraces north of the Gold Creek road (see Appendix C). The other site is across the road under the large oak trees, and consists primarily of one large stone ring. There is no doubt that Indians gathered acorns in the area and possibly used the clay for pottery.

The Gold Creek property is rich in material for study of the natural environment. Few local areas this size can boast of a stream that runs the year around, of many types of ecological communities and varieties of plant and animal life, or of a relatively undisturbed quality so close to a teeming megalopolis. Descriptions of Gold Creek emphasize, without exception, its uniqueness, its uncommon diversity, and its rare confluence of nature's wonders.

III. HISTORY OF THE PROPERTY

In 1950, the Los Angeles City Board of Education purchased, at a cost of $60,000, the Watt Ranch, now known as the Gold Creek property. The proposed use of the property was for development of an outdoor education center or

conference camp. Later studies indicated, however, that the cost of providing water, power, and other utilities would be prohibitive for the then intended use. When the Watt brothers homesteaded the site, they planted fruit trees on the south terrace and constructed a pipeline for irrigation of the orchard. They also planted some non-indigenous trees still extant on the property. Before that time it is conjectured that gold prospecting and production took place at the creek -- hence the name. There was probably at least one attempt to find oil, as evidenced by wooden structures (destroyed by the November 1975 fire) that may have been used in such an endeavor. The buildings on the site when purchased consisted of an old six room frame farmhouse, three old sheds, a one room frame sleeping cabin, and corrals. Approximately ninety acres were under cultivation at the time.

Beginning in about 1955, Los Angeles Pierce College used the facility for agricultural education, keeping up cultivation of the orchards left by the Watt brothers. After about five years, however, it became impractical to transport the equipment because of the development of the San Fernando Valley and increased costs, so Pierce abandoned this use of the property. It was then used for one or two years as a day camp by the elementary schools until the completion of facilities at Clear Creek precluded the necessity for using Gold Creek. The land was leased to private parties for recreation, hunting, and grazing of horses. C. M. Whitsel and W. P. Archer were the principle lessees; the records date their occupancy from 1954 to 1972.

Instructional use of the property for environmental science field trips began six years ago in 1969. Also in that year, the Los Angeles Community College District separated from the Los Angeles Unified School District, and the owner-

ship of Gold Creek went with the community colleges. The reason for this transfer was that the property had been acquired by using community college funds. A group of instructors presented to the Board of Trustees in July, 1970 a request that the Gold Creek site be retained by the District and designated for use as an instructional field station. The Board recommended that a committee be formed to develop long-range plans for the use of Gold Creek. An ad hoc committee met and recommended in 1971 that the site be kept and used for instruction, but no official Board action was ever taken (see Appendix D). Preliminary plans had been made by those using the property to convert the farmhouse into a classroom, but the 1971 earthquake caused irreversible damage to the structure, and it and the corrals were dismantled and removed.

IV. PRESENT USES OF THE PROPERTY

Management: Present uses of Gold Creek are coordinated by two committees, the Gold Creek Committee, formed in 1973 as a subcommittee of the Council of Instruction, and the Gold Creek Standing Committee of Instructors, formed in January, 1972 and now a subcommittee of the former. Los Angeles Pierce College has been designated custodian of the Gold Creek facility since 1950. The maintenance budget has been allocated through Pierce since 1951, but the first substantial amount of $9,950 was budgeted in 1973-74 (see Appendix E). This money was used to buy fencing, upgrade the road, purchase signs and supplies, and rent sanitary facilities. Reservations for trips to the site are handled by the Pierce Office of College Development, where information is compiled concerning the date and time of the trip, course title, college, instructor, and number of students.

Pierce has also managed a National Defense Education Act Title III-A grant of

$14,383, awarded in 1971, to buy equipment for the site (see Appendix F). An additional grant of $15,000 from the State Department of Education Environmental Protection Program, accepted May 15, 1974 was handled by Pierce. This money was used for construction of a 20 by 30 foot concrete blockhouse at Gold Creek, completed in July, 1975. The need for such a structure was indicated by the Standing Committee of Instructors for storage of equipment used in the instructional program at the facility. It was also recommended as possible housing for permanent sanitary facilities, which would require future installation of a septic tank. It was hoped that the grant would finance a fence around the blockhouse, as well as provision of space for a weather station next to the building. The grant money was expended, however, before these additional items could be purchased. Reference collections and equipment will be stored in the blockhouse.

It must be noted that the great bulk of work done during the past five years has been done by instructors on the Standing Committee. They have written proposals for special funds and coordinated grant monies, constructed trails, developed audio-taped tours, given spring faculty workshops each year, and developed a comprehensive syllabus which includes technical biological, botanical, and geological descriptions of the property and its instructional value, as well as student field exercises.

Instruction: Disciplines using Gold Creek at the present time are Anthropology, Biology, Botany, Earth Science, Entomology, Environmental Science, Geology, Meteorology, Microbiology, Natural Resources Management, and Zoology. Some of the types of activities, more detailed descriptions of which are available in the Gold Creek Syllabus, that take place at Gold Creek are:

1) Study of the environment first hand in a living laboratory, including plant and fungi studies, insect studies, reptile and amphibian studies, and bird observation.

2) Successional studies of the disturbed areas as they return to a natural state (the fire which burned through the area in November, 1975 made this a particularly fruitful area of study).

3) Investigation of trophic levels and energy flow patterns through aquatic and terrestrial ecosystems.

4) Life history studies of animals.

5) Long term studies of smog measurement and damage to plant life.

6) Studying and mapping of diverse classical geological phenomena, including topography, drainage, and direction of slope.

7) Utilization of meteorological and air sampling instrumentation as well as other devices for measuring and studying environmental parameters, such as temperature and percent relative humidity.

8) Pond and stream studies in the drainage basin, gold prospecting.

9) Soil analyses of the effects of soil compaction on water penetration and arthropod distributions.

10) Studies of the two registered archeological sites.

The above instructional activities contribute to a knowledge of life cycles, food chains, and successions of living organisms; carbon, nitrogen, and water cycles; and soil features and special adaptations to a changing environment. This knowledge is basic to an understanding of the web of life, the balance of nature, and humankind's place in the ecosystem. In addition, field laboratory experience where the student observes the natural phenomena of change is basic to a practical understanding essential for entrance into any of the allied Environmental Science fields.

The Field Experience: Though field experiences vary for different disciplines, instructors, and campuses, a general description can convey the basic essence of a field trip to Gold Creek.

The initial part of the field experience takes place in the classroom where the students are introduced to the goals of the trip, rules for Gold Creek utilization, and dress and preparation for the out-of-doors. Transportation to the site is usually by private car, though busses are used occasionally. After everyone arrives, the group is gathered near the parking area and is given a short introductory briefing. The rules for use of the site are generally reiterated. A list of these rules appears in Appendix G, and includes such things as no smoking, no unnecessary noise or destruction of natural phenomena, and no collecting of specimens unless permission is given by the instructor.

The trail taken will depend on the course, and the availability of the item or phenomenon the instructor would like to show the class. Several trails have been designated and marked with numbered stakes (many were destroyed in the November, 1975 fire and need to be replaced) which correspond to cassette tape narratives made by instructors on the Standing Committee (see Appendix A). Classes may use these marked trails or not, as the instructor wishes; most prefer to improvise, depending on the objectives for that particular trip.

Some of the significant learning activities an instructor will emphasize on a trip to Gold Creek -- activities which differ experientially from those that can be offered in the classroom are these:

1) Relating plant communities to the natural conditions in which they are found, such as temperature, moisture, land forms, related and contrasting plant communities.

2) Using the sense experiences of sight, touch, smell, and taste to identify and differentiate living things.

3) Viewing the same plant in different stages and forms growing under different conditions.

4) Seeing plants and animals in a natural environment where identifying characteristics and relationships may not be clear cut.

5) Attendance to unexpected factors, unusual forms and relating them to the particular community or ecosystem of which they are a part.

6) Application of a knowledge of plants for practical uses, i.e., medical, nutritional, or historical.

Field experience is one which generates excitement about the subject at hand, both in the instructor and in the students. It can often prompt a student to a decision for further study, or to take related courses. Questions often fly back and forth; the atmosphere is energizing and stimulating. A student may find a real sense of excitement in being able to identify a plant in its natural setting. Simply the experience of the out-of-doors can be novel and exciting for some who are natives of the inner city. Several of the instructors who regularly use the facility feel that field trips add to their own sense of involvement in nature, which positively affects their motivation and teaching performance. There is an unusual amount of faculty cooperation associated with Gold Creek, that has contributed to the improvement of instruction in the District, on both an individual and a collective basis.

Faculty In-service Training Workshops: Beginning in the Spring of 1972, the Standing Committee of Instructors has conducted five annual faculty workshops. The format of these day long Saturday visits to Gold Creek has generally involved bird walks, geology tours, instrumentation sessions, microbiological studies, water and soil analysis, increment boring demonstrations, displays of vertebrates, insects, fungi, and rattlesnakes, and tours of the designated trails. Invited to attend the events are interested faculty, some of whom have never used the Gold Creek property for field trips, administrators, students, classified employees, and Trustees. Usually attended by approximately 100 people, the day is educational, informative, and enjoyable. These workshops have served an important function in increasing usage of Gold Creek by intro-

ducing it to some, improving the field skills of others, and drawing together professors from diverse environmental science disciplines to work toward a common body of knowledge about Gold Creek.

Utilization Data: Data on the utilization of the site since extensive use began in 1972 are collated at the Los Angeles Pierce College Office of College Development. Figures for the 1972-73 school year indicate that 1,976 students visited the facility. In 1973-74, 2,139 students had field experiences at Gold Creek.

Data for 1974-75 show that a total of 1,758 student-visits took place at Gold Creek. The "energy crisis" is largely responsible for the decline in use. Instructors using the facility numbered 26, and 67 individual classes went on field trips; the number of visits per instructor ranged from 1 to 11. About two-thirds of the use of the site occurred during the Spring semester. Half of the field trips took place in April and May. Approximately half the classes using Gold Creek are Biology courses, although the classes using it cover a wide range. Overall utilization data shows Pierce and Valley Colleges using Gold Creek much more than do the other, more distant colleges. Valley accounts for 40% of the class visits, and 31% of faculty and student visits, as well as using the site nine months out of the year, compared to 5 months of use by Pierce, 3 months of use by City, Harbor, and Southwest, 2 months by Trade, and 1 month by East.

The above figures are based on a compilation of the number of student-visits to Gold Creek, so there may be repeat visits by any one student. Even so, compared to the full-time equivalent (FTE) enrollment in the disciplines using Gold Creek, or the potential users of the facility, the utilization is only a fraction of what it could be. In 1972-73, the total FTE for all applicable disciplines was 8,365, yet the total number of student-visits was 1,976, or approximately 24%. In 1974-75 the total FTE was 9,194, while student-visits

totalled 1,758, or 19% of the potential users. However, these figures include totals for disciplines for which field trips are vital, such as Biology, as well as disciplines for which they are auxiliary, such as Anthropology. They therefore represent only an approximation of potential users, the purpose of which is to give an idea of the level of present utilization, not to set a goal.

The total number of recorded student visits in 1975-76 was 969; the total number of recorded trips was 44. Seven colleges used the facility, and 47 percent of the recorded utilization took place in April and May. Classes from eight disciplines went to Gold Creek, with 31 percent of the trips taken by Biology classes. The fire in November of 1975 accounts for the unusually low utilization for this school year. It rendered the site virtually unusable for several weeks, and obviously changed the phenomena available for study. For classes interested in succession studies, however, the fire was a boon; a photographic record is being kept of Gold Creek's recovery.

Community Services Use: In October of 1973, the Standing Committee of Instructors voted against the use of Gold Creek for Community Services field trips for the following reasons:

1) The limits of impact on the property were not defined, and instruction should have the first priority for use.

2) The Committee was not prepared to train and evaluate leaders for community services tours.

3) There were no facilities for the general public, such as sanitary units, trash barrels, parking lots, or drinking water. Also, there is no security, and smoking is a great fire hazard.

Guidelines (see Appendix H) were developed, however, to minimize the effect of these obstacles to community services use, and a pilot program was begun by Valley College.

Ron Bigelow, Associate Professor of Biology at Los Angeles Valley College, reported in March of 1975 that three community services field trips were conducted in Spring of 1974 and one in Spring of 1975. A total of 44 persons participated, falling under the prescribed instructor/participant ratio of 1:20. Mr. Bigelow stated that "the program was quite successful in providing the participants with basic knowledge of the natural history of the Gold Creek property," and that "because the groups were relatively small the impact of this activity on the Gold Creek property was negligible." His report indicates that on a limited scale, community services trips to Gold Creek are a viable and worthwhile endeavor, and they could be continued.

It must be noted, however, that the drawbacks listed above, given by the Standing Committee as reasons for a negative vote, are still in effect. The Committee does not have time to train new Gold Creek instructors, the limits of environmental impact have not yet been defined, and facilities are still inadequate for use by the general public. The road and parking area have not been significantly improved, and there is no potable water available. Clearly Gold Creek does not have facilities at present for extensive use for community services field trips, but a limited pilot program is certainly feasible, and seems to be running successfully.

Advantages and Limitations: The greatest advantage of Gold Creek to the environmental sciences instructional program is the fact that it is District owned property. This means that District liability insurance is in effect at the site on field trips, liability from trespass is precluded, long term studies may be conducted, all the colleges in the District can use it, and Gold Creek is within reasonable traveling distance from all nine campuses. Prior to the availability of Gold Creek for instruction, a Biology 13 class

at Los Angeles Valley College visited places such as Mt. Pinos, Joshua Tree, and the Anza-Borrego area. The average distance traveled was 390 miles per field trip, totalling 2,256 miles in 1968, 2,540 miles in 1969, 3,818 miles in 1970, and 3,743 miles in 1971. A similar field experience can be had at Gold Creek, and is accessible to more students. A mere thirty minutes away from Valley College, the use of Gold Creek led to a total distance traveled of only 410 miles in Fall, 1974.

Two other colleges with natural science study preserves were visited, Rio Hondo College and Mount San Antonio College. A few basic facts about these two sites are included in Appendix I. The only advantage these preserves may be said to have over Gold Creek is that they are either on or next to the campus itself, though Rio Hondo does not own its site. It must be noted, however, that these schools are in single campus districts. The Gold Creek property is much more impressive in its size, its variety, and its undisturbed state. The fact that the two schools find it worthwhile to have a site for environmental studies, however, especially that Mt. San Antonio College built theirs from the ground up, testifies to the recognition of the value of such areas for community college instruction.

The limitations on present instructional use of the Gold Creek property fall generally into two areas -- (1) physical problems at the site and (2) management of the instructional program. There are physical limitations involving facilities, water supply, road condition, parking, security, and maintenance. There are program limitations involving coordination of activities and availability and development of materials.

Simply put, the physical conditions for using Gold Creek extensively as an instructional facility need improvement. The road to the parking area is

rutted and narrow; it is impassable during some winter weather. The parking area is presently an open space not clearly designated or surfaced for parking. The only sanitary facilities available are portable units rented by the District. The only available water supply is a 500 gallon storage tank. There is a need for some degree of security against vandalism and harmful trespassing, and for maintenance of certain aspects of the site such as trails and fencing. Specific short and long term suggestions to remedy these problems can be found in the Recommendations section of this report.

The instructional use of the Gold Creek site is hampered by (1) the absence of any long range District policy and goals for the use of the property, and (2) the lack of a coherent plan of organization and management of program development and operation. No specific statement of intent regarding the use of Gold Creek has been clearly enunciated by any but the instructors who have developed a comprehensive set of instructional activities in utilizing the site for field studies. Indeed, whether founded on fact or fiction, those faculty seeking to develop the instructional potential of this property have at times been truly alarmed by the possibility the District might sell this invaluable natural resource. No one person, committee, campus, or position is presently responsible for developing and managing Gold Creek--different aspects of the program are handled through different entities. There is a need for clearly delineating organization and supervision responsibilities so that optimal instructional use of the property may be attained. The major gap in the present system appears to be lack of staff assigned with direct responsibility for development and implementation of Gold Creek programs. There are several areas which require Districtwide coordination, such as development of instructional materials, trail maintenance, environmental impact studies, provision for

increased communication among faculty, information and data gathering, and long-range planning.

V. EVALUATION PLAN

The Gold Creek Evaluation Plan, published by the Office of Educational Research and Analysis, describes three major program goals:

1) To provide a well-maintained field station having a natural land and water reserve, typical of Southern California plant and animal communities, that is accessible to all colleges in the District during all terms of instruction.

2) To expand educational offerings in the environmental studies disciplines beyond those available in traditional classroom instruction, and to develop positive attitudes toward scientific studies and an awareness of environmental problems.

3) To provide in-service training opportunities for District science faculty in the use and development of a field experience curriculum.

The Preface to the Evaluation Plan states that its intention is to "(a) determine the effectiveness of the present use of Gold Creek, and (b) provide recommendations for improved use of the facility." The Evaluation Plan is developmental in nature, designed to look specifically at the present uses of the facility as described in the preceding pages, and to provide information for future planning for Gold Creek. It details in the form of Performance Objectives the steps to be followed by instructors participating in the Plan through their use of the site for field trips. The Pierce Office of College Development handles some of the processing for the evaluation, and at the present time the District Office of College Relations and Community Services handles the duties of the Program Director as designated in the Plan.

One aspect of the Evaluation Plan involves administration of a student questionnaire. Some of the results from the 300 questionnaires received during the

1975-76 school year are the following:

a. 81% of the responding students visited Gold Creek once in 1975-76.

b. 79% of those responding stayed at Gold Creek for two hours or longer.

c. 46% felt they had enough time at the site; 54% felt they did not have enough time.

d. 89% agreed that the Gold Creek field experience enhanced their interest in the course.

e. 72% agreed that the field experience improved their understanding of environmental issues.

f. 90% agreed that the field class was well structured with clear objectives.

g. 85% disagreed with the statement that activities at Gold Creek could have been accomplished in the laboratory.

h. 87% indicated that they would be interested in taking other courses involving field research.

i. 78% indicated that they would like to read more literature dealing with environmental subjects.

It would appear from these preliminary results that the second goal to expand educational offerings and develop positive student attitudes is being met. Of the 157 comments made in answer to the questionnaire's request for suggestions to improve the Gold Creek program, 31% indicated that more time should be spent at the site, and 15% suggested that more trips should be taken. Other comments related to fixing the road, leaving the site in a natural state, installing a drinking water facility, and taking overnight trips. It should be noted that many of the comments about spending more time or staying overnight came from campuses located in the inner-city rather than outlying areas of the District. Clearly the student reaction to the Gold Creek field experience program is positive and enthusiastic.

VI. ALTERNATIVE PLANS

Three alternative plans for the use and development of Gold Creek have been considered. The first proposes that Gold Creek be left essentially as it is now, with no additional expenditure for facilities or staff. The second proposes modest improvement of the facility itself and of the coordination of the instructional program. The third proposes construction of a permanent instructional facility at Gold Creek, as well as provision for a permanent staff.

All three plans require first that the Gold Creek property be designated the "Gold Creek Environmental Studies Center," to be used exclusively as an educational facility by the District colleges.

PLAN I:

A) Maintain the Gold Creek property as it is now, making no additional improvements.

B) Maintain the present structure of coordination of the instructional program.

C) Let Pierce College continue to be the official custodian of Gold Creek.

The projected budget for 1976-77 through 1979-80 for PLAN I is shown below:

	1976-77	1977-78	1978-79	1979-80
Supplies	2,000	2,200	2,420	2,662
Building Rental	825	908	999	1,099
Maintenance, grounds	5,700	6,270	6,897	7,587
A & I, Bldg.	3,950	500	550	605
Equipment	3,532	1,000	1,100	1,210
Other Expense	1,650	1,815	2,000	2,200
TOTAL	17,657	12,693	13,966	15,363

PLAN II:

A) Improve Gold Creek facilities and services through the following actions:

1. Improve the road by graveling the entire surface, adding turnouts, berm and gutters, barricades at sharp turns, and drainage culverts.

2. Install a septic tank, and necessary sanitary facilities in the existing blockhouse.

3. Designate, grade, and gravel a specific parking area.

B) Assign an "Environmental Studies Coordinating Instructor" on a half-time basis to coordinate development of the Gold Creek property for instructional use and improvement of the educational program. A suggested job description, including training and experience requirements, is included in Appendix J. The Coordinating Instructor would be under the general supervision of the Office for New Dimensions.

C) Undertake a study of the available water supply to assess its alignment with present and proposed utilization of the facility. The study should answer the following questions:

1. How much potable water is necessary for the projected use of Gold Creek?

2. How much non-potable water is necessary for sanitary facilities and fire-fighting reserve?

3. What type of water delivery system is required to meet the above needs, and what will be the costs involved?

D) Let Pierce College continue to be the official custodian of Gold Creek.

The projected budget for 1976-77 through 1979-80 for PLAN II is shown below:

	1976-77	1977-78	1978-79	1979-80
Supplies	2,000	3,000	4,000	5,000
Building Rental	825	400	-0-	-0-
Maintenance, grounds	5,700	6,270	6,897	7,587
A & I, Bldg.	3,950	-0-	-0-	-0-
Equipment	3,532	1,000	1,100	1,210
Other Expense	1,650	1,815	2,000	2,200
Road Improvement	-0-	156,650	-0-	-0-
Septic Tank	-0-	10,237	-0-	-0-
Parking area	-0-	10,563	-0-	-0-
Coordinator	-0-	13,970	15,367	16,903
Water Study	-0-	2,500	-0-	-0-
TOTAL	17,657	206,405	29,364	32,900

PLAN III:

A) Implement all the provisions of PLAN II.

B) Install the water system recommended by the study suggested in PLAN II.

C) Improve the Gold Creek site by constructing a permanent instructional facility, using shared funding between instructional and community services budgets, which would include:

1. A multi-purpose classroom/laboratory which would accommodate at least 40 persons, and an office/library.

2. An outdoor amphitheater in close proximity to the other buildings.

D) Appoint an "Environmental Studies Center Supervisor" to maintain the facility after the construction project is completed. This Supervisor will work with the "Environmental Studies Coordinating Instructor" in development and implementation of Gold Creek programs. A suggested job description, including training and

experience requirements, appears in Appendix K.

E) Terminate the role of Pierce College as custodian after completion of the construction project and appointment of both Gold Creek Staff members.

The projected budget for 1976-77 through 1979-80 for PLAN III is shown below:

	1976-77	1977-78	1978-79	1979-80
Total, PLAN II	17,657	206,405	29,364	32,900
Classroom/Laboratory	-0-	-0-	60,000	-0-
Amphitheater	-0-	-0-	5,000	-0-
Supervisor	-0-	-0-	12,000	13,200
Equipment	-0-	-0-	3,900	-0-
Water System*	-0-	-0-	-0-	-0-
TOTAL	17,657	206,405	110,264	46,100

*It is impossible to estimate at this time the cost of installation of a water system.

VII. SUMMARY

This report has outlined in some detail the history and present uses of the Gold Creek property. Its intent has been to serve an informative purpose, but also a philosophical one --to emphasize that instructional use of Gold Creek is of value to the District. It makes possible high quality field training for students planning for outdoor professions -- the botanists, environmental quality control personnel, field biologists, forest rangers, natural resources management personnel, naturalists, park rangers, and zoologists that society needs in this era of pollution and diminishing natural resources. The availability of Gold Creek enhances the quality of environ-

mental studies in the District by generating enthusiasm among faculty and students, making possible long-term field studies, and presenting an example of enlightened and conscientious land use.

The program at Gold Creek, however, requires expansion so that more students may benefit from it, coordination so that efforts need not be duplicated and diluted, and dedication on the part of the District so that those who use Gold Creek may assume that it will be preserved. It is the consensus of both the instructors who use the property and the Gold Creek Committees that multiple use of Gold Creek for more than instruction, e.g., extensive recreational use, is inconsistent with the idea of natural preservation, and would destroy its unique instructional value. It seems self-evident in our present environmental condition that a study preserve, a wildlife sanctuary, a naturally undisturbed environment should be protected as such, and protected from abuse or overuse. The fragility of the natural environment, its vulnerability to the impact of human utilization, cannot be overemphasized. With overuse of a place like Gold Creek, wildlife begins to scatter deeper into the hills, soil begins to compact until it upsets the natural water balance, automobiles pollute the air and damage the plant life, litter collects, and numerous other changes occur which are destructive, irreversible, and tragic. Implicit, therefore, in the recommendations made in this report is the need for definition of optimal usage of Gold Creek. This study has shown that the facility could be accessible to more students, and suggests that it be improved as a field station through building of additional facilities. Increased use, however, need not lead to destruction of its unique educational value.

Historical data in this report indicate that the approximately 2,000 students now participating annually in field studies at Gold Creek constitute only

about 20% of the students enrolled in the disciplines represented. The potential number of users who could benefit from improved accessibility and facilities could approach 5,000 - 7,000 per year.

In this era of energy conservation planning, the proximity of the Gold Creek site offers an unusual opportunity to effect significant reductions in fuel consumption and travel time and costs. In the case noted previously in this study, one instructor's travel was reduced from a total of 3,743 miles to 410 miles per year. At 16¢ per mile this amounts to $500 for just one instructor. The savings for student drivers would be equally significant in terms of cost and fuel consumed.

III. RECOMMENDATIONS

The following recommendations encompass in somewhat abbreviated version the three plans discussed in Section VI. Implementation of Recommendation 1 only would be equivalent to PLAN I. Implementation of Recommendations 1 through 4 would be equivalent to PLAN II. Implementation of all of the following recommendations would be equivalent to PLAN III, and the budget on page 25 represents the total estimated costs through 1979-80. The committees urge that at least the first three items be implemented, as they are essential to improving the quality and safety of the Gold Creek program.

1. That the Gold Creek property be designated the "Gold Creek Environmental Studies Center," to be used exclusively as an educational facility by the Los Angeles Community Colleges.
2. That funds be budgeted in the 1977-78 fiscal year for the following improvements to the Gold Creek property:

a. Improve the road by graveling the entire surface, adding turnouts, berm and gutters, barricades at sharp turns, and drainage culverts.

b. Install a septic tank, and necessary sanitary facilities in the existing blockhouse.

c. Designate, grade and gravel a specific parking area.

3. That an "Environmental Studies Coordinating Instructor" be assigned under the supervision of the Office for New Dimensions on a half-time basis in 1977-78 to coordinate development of the Gold Creek property for instructional use and improvement of the educational program (a suggested job description, including training and experience requirements, is included in Appendix J).

4. That a study be undertaken in 1977-78 of the available water supply to assess its alignment with present and proposed utilization of the facility. The study should answer the following questions:

a. How much potable water is necessary for the projected use of Gold Creek?

b. How much non-potable water is necessary for sanitary facilities and fire fighting reserve?

c. What type of water delivery system is required to meet the above needs, and what will be the costs involved?

5. That funds be budgeted in the 1978-79 fiscal year for the following improvements to the Gold Creek property:

a. A multi-purpose classroom/laboratory which would accommodate at least 40 people, and an office/library.

b. An outdoor amphitheater in close proximity to the other buildings.

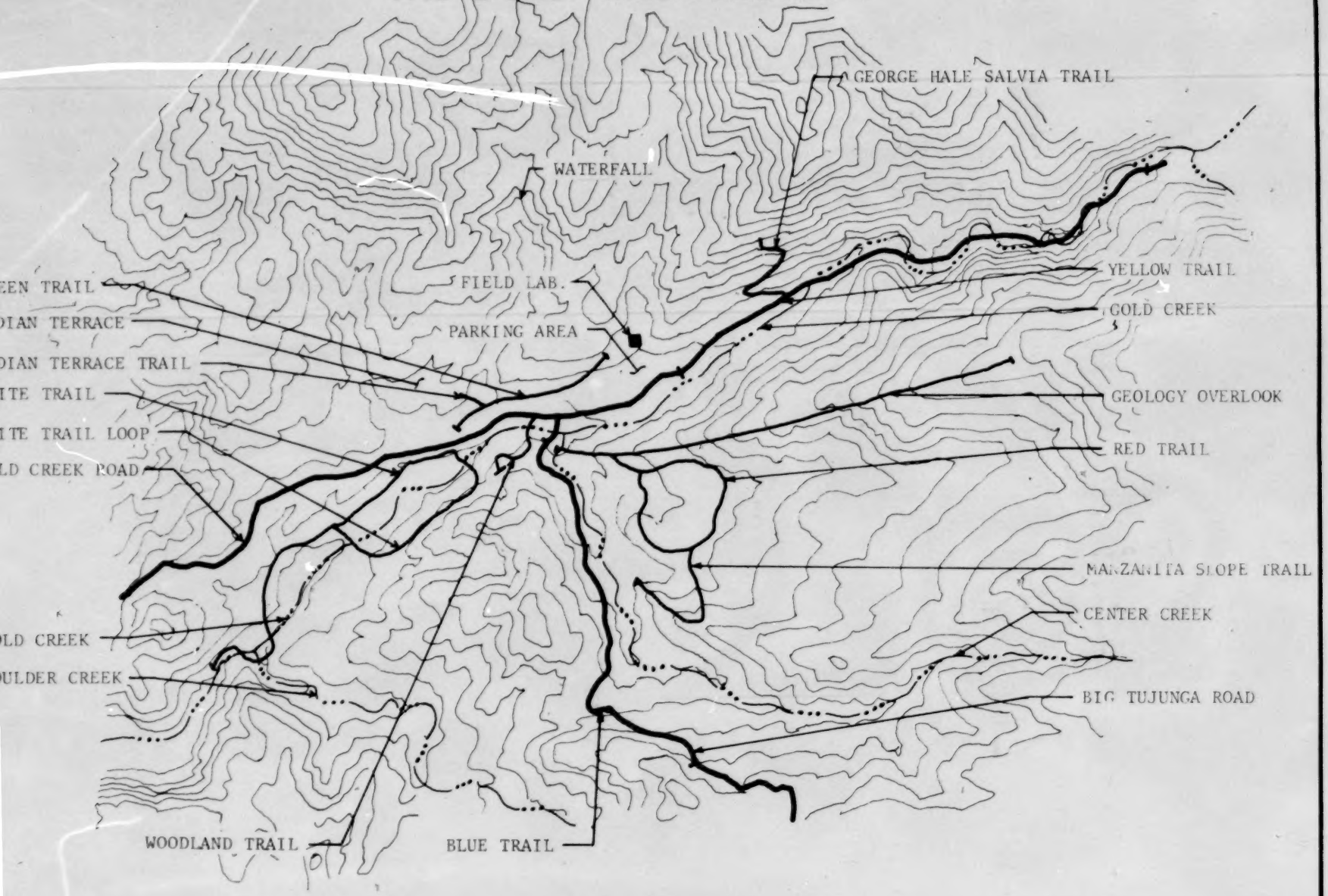
6. That an "Environmental Studies Center Supervisor" be assigned to maintain and supervise the facility after the construction project is completed in 1978-79. This Supervisor will work with the "Environmental Studies Coordinating Instructor" in development and implementation of Gold Creek programs. A suggested job description, including training and experience requirements, appears in Appendix K.

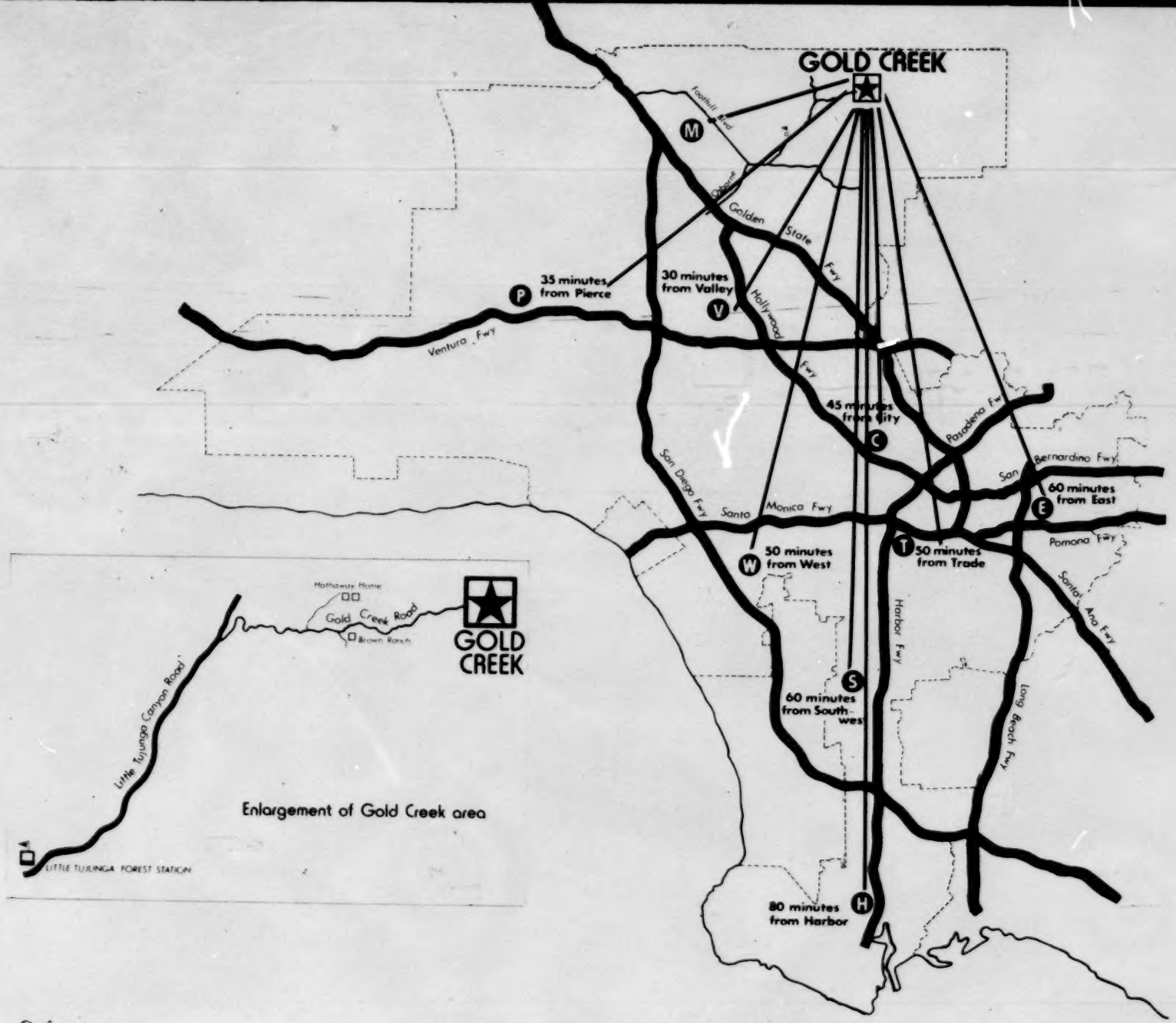
The proposed budgets for 1976-77 through 1980 are shown below:

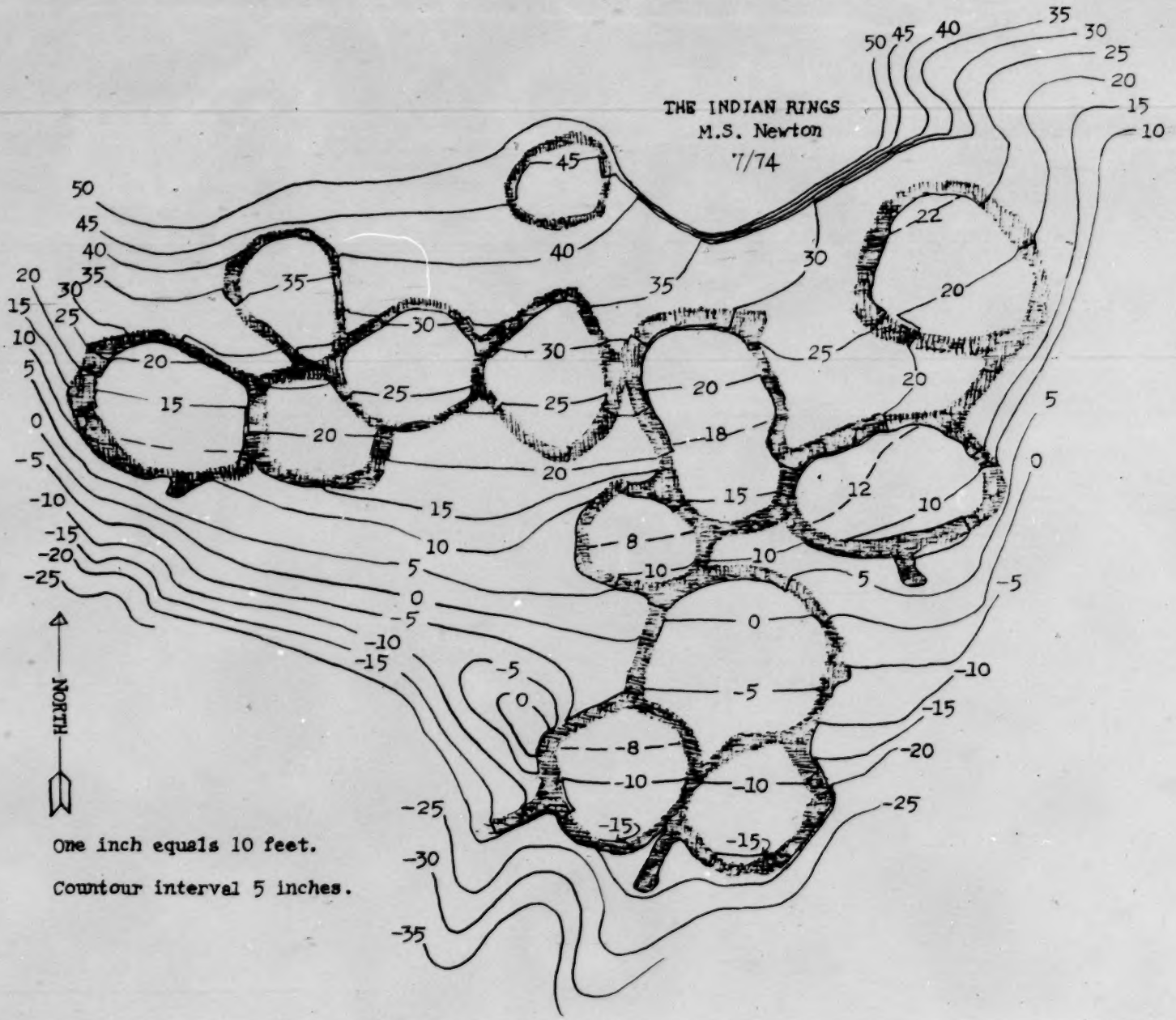
	1976-77	1977-78	1978-79	1979-80
Supplies	2,000	3,000	4,000	5,000
Building rental	825	400	-0-	-0-
Maintenance, grounds	5,700	6,270	6,897	7,587
A & I, Bldg.	3,950	-0-	-0-	-0-
Equipment	3,532	1,000	5,000	1,210
Road Improvement	-0-	156,650	-0-	-0-
Septic Tank	-0-	10,237	-0-	-0-
Parking area	-0-	10,563	-0-	-0-
E. S. Coordinator	-0-	13,970	15,367	16,903
E. S. Supervisor	-0-	-0-	12,000	13,200
Water Study	-0-	2,500	-0-	-0-
Classroom/lab Office/library	-0-	-0-	60,000	-0-
Amphitheater	-0-	-0-	5,000	-0-
Other Expense	1,650	1,815	2,000	2,200
TOTAL	17,657	206,405	110,264	46,100

APPENDICES

THE GOLD CREEK PROPERTY




GOLD CREEK
Foothill Blvd
Ventura Fwy
35 minutes from Pierce
30 minutes from Valley
Golden State Fwy
Hollywood Fwy
45 minutes from City
Pasadena Fwy
San Bernardino Fwy
60 minutes from East
San Diego Fwy
Santa Monica Fwy
50 minutes from West
50 minutes from Trade
Pomona Fwy
Santa Ana Fwy
Harbor Fwy
Long Beach Fwy
60 minutes from South-wes
80 minutes from Harbor
Hathaway Home
Gold Creek Road
Brown Ranch
GOLD CREEK
Little Tujunga Canyon Road
LITTLE TUJUNGA FOREST STATION
Enlargement of Gold Creek area


THE INDIAN RINGS
M.S. Newton
7/74
NORTH
One inch equals 10 feet.
Countour interval 5 inches.

COPY

APPENDIX D

INTER-OFFICE CORRESPONDENCE
LOS ANGELES COMMUNITY COLLEGES
October 15, 1970

To: Dr. Donald Click, Chancellor
Dr. Esther Davis, Assistant Superintendent, Instruction
Dr. Robert Horton, President, Los Angeles Valley College

From: Mrs. Eugenia Crawford, Chairman, Gold Creek Committee

Subject: RECOMMENDATION - GOLD CREEK STUDY COMMITTEE

The Committee appointed to prepare a recommendation on the Gold Creek Canyon has met. Enclosed are the minutes of that meeting as well as letters that we have received related to this Study.

We considered the following three possible actions:

1. Sell the land. To sell the property on the open market would gain some monetary return but there is no possibility of replacement later.

2. Keep the land. Recommended by the Committee.

3. Lease the land. This is not objectionable.

If the National Science Foundation is willing to equip the station, the District will need to officially designate this area as a field station.

It is the recommendation of the Committee that the 240 acres in Gold Creek Canyon be made a field station which may be used by all departments and those community groups interested in ecological studies.

EC:be
Enclosures

cc: Richard Rynn, District Office
Barbara Hopper, L. A. Pierce College
William Lewis, L. A. Valley College

GOLD CREEK BUDGET FOR 1973 - 1974 YEARS

	INITIAL COST	UPKEEP			
	1973-74	1974-75	1975-76	1976-77	1977-78
1. Fencing	$1500	$ 300	$ 500	$ 500	$ 500
2. One Mile Roadway and Parking (Oiling and Grading)	5000	5300	5500	5700	5900
3. Water System	1800	300	350	400	450
4. Sanitary Facilities Rental (Chemical Toilets)	750	775	800	825	850
5. Posting (Signs) (Property and Plant I.D.)	400	100	125	150	175
6. Supplies (To include locks, keys, gasoline, towels, tissue, small tools)	300	350	400	400	400
7. Contingencies	200	200	200	200	200
TOTALS	$9950	$7325	$7875	$8175	$8475

31

APPENDIX E

L. A. PIERCE COLLEGE

Environmental Sciences Field Laboratory Station--GOLD CREEK

EQUIPMENT LIST

Purchased through NDEA TITLE III A, N-19-6474-6163

6	ea.	CABINET, storage, w/lock
5	ea.	TABLE, rectangular
1	ea.	LIGHT, ultra violet, portable
1	ea.	PROJECTOR, super 8mm cartridge
8	ea.	MICROSCOPES
6	ea.	STEREOMICROSCOPES
2	ea.	SPOTTING SCOPES
2	ea.	TRIPOD
12	ea.	BINOCULAR
1	ea.	ALTERNATOR
1	ea.	THERMOMETER, recording thermograph
1	ea.	WEATHER INSTRUMENT SHELTER
6	ea.	WATCH, stop
1	ea.	BROODER-chicken
2	ea.	AQUARIA, 30 gallon
1	ea.	BAROMETER, recording
1	ea.	INDICATOR, wind speed
4	ea.	RECORDER, cassette
1	ea.	BATTERY PACK
1	ea.	WATER ANALYSIS KIT
4	ea.	WADDELL CASE and TOP

1	ea.	CABINET, Herbarium
1	ea.	CABINET, insect and case
1	doz.	CORNELL DRAWERS for cabinet
1	ea.	SHELTER, instrument
1	ea.	HYGROTHERMOGRAPH
1	ea.	MICROBAROGRAPH, precision
1	ea.	GAGE, recording rain
1	ea.	PSYCHROMETER
1	ea.	WIND MEASURING SET, hand-held
1	ea.	GAGE, rain and snow
1	ea.	TRUCK, van type
1	ea.	GEIGER COUNTER, w/Bismuth probe

RULES FOR UTILIZATION OF GOLD CREEK FIELD STATION

1. Visitors to this site should wear clothing and shoes appropriate for the field.
2. Food and non-alchoholic drink are suggested during lunch-time, since no stores exist in the area.
3. Students should come with field equipment (notebook, binoculars, camera, reference books).
4. No fires or smoking at the site.
5. Park only in designated areas.
6. Take out all the waste paper, cans, etc. that are brought in.
7. Do not drink the stream water.
8. Avoid unnecessary noise at the site.
9. Stay on established trails or roads. (Poison Oak abundant; rattlesnakes are present).
10. No unauthorized collecting will be allowed. Do not damage the site. Observe the animals only.
11. No fire-arms or hunting knives permitted on the site.

GOLD CREEK PERMANENT STANDING COMMITTEE
Spring 1975

COMMUNITY SERVICE ACTIVITIES FOR GOLD CREEK
SPRING 1973
LAVC

POLICY REGARDING USE OF GOLD CREEK PROPERTY FOR COMMUNITY SERVICE ACTIVITIES:

All community service activities at Gold Creek must be directed by a "qualified gold creek instructor" who must be present as long as community members are on the property.

All community service activities must meet the rules and objectives which have been established by the Gold Creek Standing Commitee.

The "qualified gold creek instructor" who is directing the activity should make every attempt to insure that the number of participants does not exceed the limits established by the Gold Creek Standing Committee.

The number of participants is limited to a maximum of 20 participants for each "qualified gold creek instructor" present.

(If gold creek instructors desire pay for their services this must be arranged through their own community service organizations)

REQUIREMENTS FOR "QUALIFIED GOLD CREEK INSTRUCTORS" WHO WISH TO DIRECT COMMUNITY SERVICE ACTIVITIES AT GOLD CREEK:

Must qualify as instructors in the Los Angeles Community College District.

Must be familiar with the gold creek property.

Must visit the gold creek property prior to directing an activity on the site.

Must be familiar with the objectives and rules for use of the gold creek property.

Members of the Gold Creek Standing Committee will be happy to assist faculty who are interested in planning community service activities at gold creek.

THE GOLD CREEK STANDING COMMITTEE MUST BE INFORMED OF ALL INTENDED USE OF THE GOLD CREEK PROPERTY

RIO HONDO AND MT. SAN ANTONIO COLLEGE -- STUDY PRESERVES

The Rio Hondo reserve is 80 acres next to the campus, owned by the Los Angeles County Sanitation District. The school has on file a letter of permission to use the property. Disciplines making use of the site include Biology, Botany, Geography, Geology, and a "Man and His Environment" class. It is a canyon of coastal sage scrub community for the most part, with four coastal live oak trees, chaparral plants, and grassy areas. They have identified fifty kinds of plants and 85 kinds of birds, all of which are on record in extensive files which they keep on the site. The value of the area lies partially in the fact that it is a relatively untouched natural area, having been used only as a cattle grazing area by a dairy farm. The school keeps the site posted with signs requesting trespassers and especially motorcyclists to help preserve it by going elsewhere. Its major value, however, as stated by a Biology professor, is its closeness to the campus, but classes do take field trips to study other kinds of environments.

The Wildlife Sanctuary at Mt. San Antonio College is a ten acre site built in 1965 from the ground up at a cost of approximately $95,000 in Community Services funds. It is used for Community Services (seniors, school, and scout groups) and instructional purposes, with tours scheduled through the Community Services office and led by Biology students. The site was designed by a landscape architect and contains a highly varied environment. There are three types of water supply -- a marsh, a lake, and a deep pond. The site contains a meadow, a wooded area, mostly native but a few foreign plants. Studies show an abundance of wildlife even in this relatively small area, with almost four times as many rodents per acre in the sanctuary as outside the site. It gets fairly

heavy use; from October through May of 1975, 139 tours were led for a total of 4500 visitors and students. According to Mt. San Antonio College staff, the sanctuary enhances both the instructional program and community relations for the school.

ENVIRONMENTAL STUDIES COORDINATING INSTRUCTOR

DUTIES:

Coordinates the use of the Gold Creek property
Handles budget, equipment and supply order for Gold Creek
Keeps utilization data on Gold Creek
Performs on-going evaluation of environmental impact of use
Develops field exercises for Gold Creek Syllabus
Develops and maintains instructional trails, guides, and tapes
Develops mini-courses for Saturdays or summers in Botany, Biology Entomology, Geology, Mammology, Ornithology, Soil, Fauna, etc.
Develops Community Services courses
Develops Faculty In-Service Training Workshops, in conjunction with the Gold Creek Standing Committee of Instructors
Visits District Colleges to encourage utilization of Gold Creek and to orient new professors
Serves as chairperson of the Gold Creek Standing Committee of Instructors
Submits Data to the Standing Committee
Implements the Recommendations of the Standing Committee
Supervises Environmental Studies Center Supervisor

MINIMUM REQUIREMENTS:

A Master's or higher degree in Biology or a closely related field

Some Administrative experience

Three years teaching in the LACCD, preferably in field biology or geology

Familiarity with budgets, grants, and equipment

Experience with Southern California Flora and Fauna

Museum technique experience

ENVIRONMENTAL STUDIES CENTER SUPERVISOR

DUTIES: Supervises use of Gold Creek by classes, delivers orientation programs
Maintains, accounts for, and issues field equipment -- recommends and/or acquires new equipment
Demonstrates field techniques and equipment
Constructs displays and dioramas
Sets up demonstrations from collections
Keeps weather and stream flow data, keeps on-going records of new plants, insects, reptiles, amphibians, birds and mammals
Orders necessary consumable supplies
Maintains trails
Maintains buildings, services wash rooms
Maintains utilization data, and coordinates scheduling of classes

MINIMUM REQUIREMENTS:

An Associate in Arts degree and two years of experience in the field of Biology, Ecology, Botany, Entomology, Ornithology, Herpetology, Mammology, or other Biological Science

OR

A bachelor of Arts degree in any of the above fields

AND

Experience in field study techniques, and familiarity with Southern California flora and fauna

Ability to work without supervision

Museum experience or courses in museum preparation

GOLD CREEK COMMITTEE

Thomas L. Stevens	LOS ANGELES COMMUNITY COLLEGE DISTRICT
Milton E. Davis	LOS ANGELES CITY COLLEGE
Jack Smith	LOS ANGELES HARBOR COLLEGE
James Grivich	LOS ANGELES MISSION COLLEGE
William Morosi	LOS ANGELES PIERCE COLLEGE
Donald H. Misumi	LOS ANGELES TRADE-TECHNICAL COLLEGE
Eugenia B. De Witt	LOS ANGELES VALLEY COLLEGE
Stephen Schwartz	WEST LOS ANGELES COLLEGE
Ray Johnson	LOS ANGELES COMMUNITY COLLEGE DISTRICT

GOLD CREEK STANDING COMMITTEE OF INSTRUCTORS

Ronald H. Bigelow	LOS ANGELES VALLEY COLLEGE
Frances L. Cramer	EAST LOS ANGELES COLLEGE
Milton E. Davis	LOS ANGELES CITY COLLEGE
Eugenia B. De Witt	LOS ANGELES VALLEY COLLEGE
Barbara K. Hopper	LOS ANGELES PIERCE COLLEGE
Donald H. Misumi	LOS ANGELES TRADE-TECHNICAL COLLEGE
Mary C. Mundell	LOS ANGELES TRADE-TECHNICAL COLLEGE
Mark S. Newton	LOS ANGELES CITY COLLEGE
Elizabeth Nuckolls	WEST LOS ANGELES COLLEGE
Beverly Shue	LOS ANGELES HARBOR COLLEGE
Arnold Small	LOS ANGELES HARBOR COLLEGE
Marshall Smith	LOS ANGELES MISSION COLLEGE
Mildred D. Wissler	LOS ANGELES VALLEY COLLEGE
Laurel Woodley	LOS ANGELES SOUTHWEST COLLEGE

SOURCES

De Witt, Eugenia, and Woodley, Laurel, eds. Gold Creek Station Syllabus, Los Angeles Community College District, 1975.

Gold Creek Committee, Los Angeles Community College District, minutes of the meetings, 9/25/73 through 5/7/75.

Gold Creek Standing Committee of Instructors, Los Angeles Community College District, minutes of the meetings, 6/8/72 through 10/2/75.

Los Angeles Community College District Board of Trustees, official minutes of the regular meeting, July 21, 1970.

Pelegrino, Donald A., ed. A Feasibility Study of the Gold Creek Property for Outdoor Education, Recreation and Youth Services Planning Council, June, 1967.

Pratt, Arden L., Environmental Education in the Community College (Washington, D.C.: American Association of Junior Colleges, 1971).

Young, Edwin A., Feedback on Fieldwork on the Gold Creek Project, June 13, 1975.

CLEARINGHOUSE FOR
JUNIOR COLLEGES

DEC 1 1978

UNIVERSITY OF CALIF.
LOS ANGELES